Report from the 3rd meeting of
CEPT WRC-07 Conference Preparatory Group (CPG)
17-20 January 2005

The third meeting of the Conference Preparatory Group for WRC-07 (CPG) of European Conference of Post and Telecommunications (CEPT) was held in Neushatel, Switzerland during 17-20, January 2005. The highlights/decisions of the meeting, for each WRC-07 agenda item, are provided below.

Agenda Item 1.2 - *consideration of allocations and regulatory issues related to the Earth exploration-satellite (passive) service, space research (passive) service and the meteorological satellite service in accordance with Resolutions 742 (WRC-03) and 746 (WRC-03).*

With regard to sharing issues between the passive services and the fixed and mobile services in the 36-37 GHz band (Res. 742) and 10.6-10.68 GHz band (Res. 746), the preliminary CEPT position is to supports the protection of the passive services while not placing undue constraints on the other allocated services. The NATO stated that in the band 36-37 GHz, military mobile radio stations need spectrum support for roaming without geographical constraints.

With regard to extending the current 18.1-18.3 GHz geostationary meteorological satellites allocation in the space-to-Earth direction to 300 MHz of contiguous spectrum in the 18.0-18.4 GHz band (Res. 746), the CEPT supports the extension of the METSAT allocation by 100 MHz, under the same regulatory conditions as in the band 18.1-18.3 GHz in order to ensure adequate protection of the existing services.

Agenda Item 1.3 - *allocations related to the Earth Exploration-Satellite Service (active), Space Research Service (active) and the Radiolocation service in accordance with Resolutions 747 (WRC-03).*

With regard to this agenda item, the preliminary CEPT positions are as follows:

1. CEPT supports the upgrade of radiolocation service in the bands 9 000-9 200 MHz and 9 300-9 500 MHz provided that sharing with radionavigation is possible and conditional on protecting radionavigation which is delineated as a safety service (RR 4.10).
2. CEPT supports the additional allocation of the frequency band 9300-9500 MHz to the EESS (active), SRS (active) in Regions 1, 2 and 3, provided that sharing with other services is feasible and provided that the present RR provision 5.476A protecting radionavigation and radiolocation, is also extended to this band.
3. The upgrade of the Radiolocation service should not be conditional on an additional allocation for EESS (active) and SRS (active). This point was promoted by Netherlands while Italy emphasized that priority should not be given to radiolocation status over the EESS/SRS extension.

Agenda Item 1.4 - *frequency-related matters for the future development of IMT-2000 and systems beyond IMT-2000 taking into account the results of ITU-R studies in accordance with Resolution **228 (Rev.WRC-03)***
With regard to this agenda item, the CEPT considered that there may be a need for new radio interface(s) to be developed around the year 2010. A new mobile radio interface capable of supporting high data rates with high mobility could be widely deployed around the year 2015 in some countries. The frequency range around 3 to 6 GHz is under consideration to meet the requirements of the new mobile radio interface.

On the issue of identification of possible candidate bands, the ongoing work in CEPT indicates interest in two candidate frequency ranges. The lower range is 450 – 470 MHz and the higher range is 470 – 862 MHz. ECC PT1 has requested further information/comment from WG RRC06 and FM

On the issue of "Naming", the CEPT is of the view that:

- the term "IMT-2000" should be retained to describe the current IMT-2000 radio interfaces and their future developments as detailed in M.1457 and M.1645;
- the generic root name IMT covers the capabilities of IMT-2000, future development of IMT-2000 and systems beyond IMT-2000;
- the new name(s) for new radio interface(s) to address capabilities/elements should be developed.

Agenda Item 1.5 - *spectrum requirements and possible additional spectrum allocations for aeronautical telecommand and high bit-rate aeronautical telemetry.*

Regarding the inclusion of definitions for the aeronautical telemetry and aeronautical telecommand in the Article 1 of the Radio Regulations, the Netherlands questioned the need for the proposed new definitions. After discussion it was agreed to change the position to "CEPT is considering the pros and cons of the inclusion of the following definitions…"

CEPT is of the view that there is a need to study the amount of spectrum as well as the frequency range needed for the current and future UAV use.

CEPT also noted that since the MLS band was identified as a possible candidate band under this agenda item, there may be a need for a new ITU-R recommendation to establish the range separation trigger coordination distance between the MLS station and the telemetry/telecommand transmitter.

Agenda Item 1.6 - *additional allocations for the aeronautical mobile (R) service in parts of the bands between 108 MHz and 6 GHz, in accordance with Resolution 414 (WRC-03) and, to study current satellite frequency allocations, that will support the modernization of civil aviation telecommunication systems, taking into account Resolution 415 (WRC-03).*
With regard to Resolution 414, the CEPT considered new information on the outcomes of the ITU WP 8B & 8D meetings, a proposal for an AMRS allocation in the DME band and information from EUROCONTROL on introduction of short term measures to

alleviate congestion in existing aeronautical bands. The preliminary CEPT position was revised to support, in principle, the new allocations for AM(R)S between 108 MHz and 6 GHz.

With regard to resolution 415, CEPT decided "not to support" proposals for new allocations to AMSS under this agenda item. CEPT however, is in favor of studies on the possibility to broadening the services and applications which may use the current satellite frequency allocations.

Agenda Item 1.7 - *sharing between the mobile-satellite service and the space research service (passive) in the band 1 668-1 668.4 MHz, and between the mobile-satellite service and the mobile service in the band 1 668.4-1 675 MHz.*
Italy, supported by the NATO representative, emphasized the need to study the impact of power reduction and antenna pointing restrictions for tactical radio relays in the band 1668-1675 MHz). Italy/NATO stressed that tactical radio relays operations are highly mobile and may not comport with possible antenna pointing restrictions required to protect GSO MSS uplinks.

Agenda Item 1.8 - *studies on technical sharing and regulatory provisions for the application of high altitude platform stations operating in the bands 27.5-28.35 GHz and 31-31.3 GHz in response to Resolution 145 (WRC-03), and for high altitude platform stations operating in the bands 47.2-47.5 GHz and 47.9-48.2 GHz in response to Resolution 122 (rev. WRC-03)*
With regard to this agenda item, CEPT made note of the recent work in ITU-R Working Party 4-9S and Working Party 9B and to information from CITEL.

Agenda Item 1.9 - *technical, operational and regulatory provisions applicable to the use of the band 2 500-2 690 MHz by space services in order to facilitate sharing with current and future terrestrial services without placing undue constraint on the services to which the band is allocated*
With regard to this agenda item, primary European objective is to safeguard existing and future terrestrial (IMT-2000) operations from possible satellite interference. CEPT is participating in the work of ITU-R JTG 6-8-9.

Agenda Item 1.10 - *review of the regulatory procedures and associated technical criteria of Appendix 30B, without impact on existing allotments or assignments, Resolution 146 (WRC-03).*
CEPT considers that linkage between agenda items 1.10 and 1.19 should be avoided.
CEPT is considering changes to the provisions of Appendix 30B based on the following topics:

- Independence of the 6/4 GHz and 13/10-11 GHz parts of the Plan
- PDA retention
- Existing systems
- Subregional systems
- Additional Uses
- Macrosegmentation

Agenda item 1.11 - *to review sharing criteria and regulatory provisions for protection of terrestrial services, in particular terrestrial television broadcasting services, in the band 620-790 MHz from BSS networks and systems, in accordance with Resolution 545 (WRC-03)*

CEPT will seek to protect terrestrial services including the terrestrial television broadcasting systems in this band.

Agenda Item 1.12 - *Coordination and notification procedures for satellite networks" in accordance with Resolution **86 (WRC-03)***
CEPT is working on possible modifications to Articles **9** and **11**.

- Reciprocity and transitivity of Article 9.11A. CEPT is of the view that the provisions of No. **9.11A** apply to all space services allocated with equal rights if the provisions of No. **9.11A** apply to any one in the band. The CEPT is considering whether this principal of transitivity should apply to terrestrial services as well.
- Introduction of the coordination arc concept for geostationary MSS networks between 1 and 3 GHz
- Review of the No. **11.47** in light of the decisions taken regarding the suppression of the possibility of extension of the date of bringing into use contained in No. **11.44.**
- Revision of Nos. **11.43A** and **11.43B** with regard to modification of characteristics of assignments already recorded in the MIFR.
- Resolution **34 (Rev.WRC-03)** and possible modifications to Table **21-4** of Article **21** of the Radio Regulations.
- Abrogation of Resolution **57 (WRC-2000)**
- Footnote **5.538** and possible modifications to Table **21-4** of Article **21**

Agenda Item 1.13 - *taking into account Resolutions 729 (WRC-97), 351 (WRC-03) and 544 (WRC-03), to review the allocations to all services in the HF bands between 4 MHz and 10 MHz, excluding those allocations to services in the frequency range 7 000-7 200 kHz and those bands whose allotment plans are in Appendices 25, 26 and 27 and whose channelling arrangements are in Appendix 17, taking account of the impact of new modulation techniques, adaptive control techniques and the spectrum requirements for HF broadcasting*
Preliminary CEPT Positions:

1. By supporting Resolution 544 (WRC-03), CEPT accepts the case for extra broadcasting spectrum as indicated in this Resolution and will aim to satisfy this need, but also recognises the need for sufficient spectrum of other affected services in the range 4-10 MHz to be taken into account;
2. CEPT is of the opinion that sharing between the Broadcasting – and Maritime Mobile Services is not feasible;
3. In order to resolve the agenda item, CEPT is proposing a sharing scenario between Fixed- and Land Mobile Service and the Maritime Mobile Service in certain portions of the bands of Appendix 17 as modified and as instructed under Resolution 351 (WRC-03);

4. CEPT is of the opinion that this sharing scenario is only possible by the introduction of digital technology, adaptive control techniques for the Fixed-Land Mobile- and Maritime Mobile Services offering dynamic frequency selection, and the application of appropriate assignment rules;
5. CEPT is offering this sharing scenario to the Fixed- and Mobile Services to provide additional bands from which to select the most suitable frequency, particularly when using adaptive control techniques. In addition these additional resources could help to offset the loss of spectrum to the Broadcasting Service in the presently allocated bands to these affected services.
6. CEPT is of the opinion that, where possible, the allocations between the Fixed- and Land Mobile Services, and indeed to some other non-planned mobile services, should be merged into a generic allocation;
7. CEPT is of the opinion that after implementation of the necessary extra spectrum for the Broadcasting Service there will be no more reason to schedule broadcasting transmissions below 10 MHz outside the procedures for Article 12 or the tropical bands and that administrations should take all necessary steps to discourage such activity;
8. CEPT recognises the unsatisfied requirement for a globally harmonised allocation of 300 kHz around 7 MHz for the Amateur Service. Despite the difficulties demonstrated at WRC-03 to solve this matter, CEPT intends to find an adequate solution between 4-10 MHz at WRC-07.

Both Italy and Russia expressed concern regarding possible loss of fixed and mobile spectrum in 4 – 10 MHz band. Finland added that any loss of spectrum by the fixed- and mobile services should be "fully compensated." France noted that CEPT has to find some mitigation measures to address concerns of the fixed and mobile communities, one of these measures could be to "compensate" the loss of spectrum through additional allocations in the mobile maritime bands.

CPM Chairman, Mr Aresteh reported to the CPG on establishment of a co-ordination group for Agenda Item 1.13 comprising the Chapter Rapporteur, Pekka Lansman, and 4 Vice Chairmen from the concerned Working Parties.

Agenda Item 1.14 - *Operational procedures and requirements of the Global Maritime Distress and Safety System (GMDSS) and other related provisions of the Radio Regulations*
This WRC-07 agenda item was not discussed at this meeting.

Agenda Item 1.15 - *secondary allocation to the amateur service in the frequency band 135.7-137.8 kHz*
This WRC-07 agenda item was not discussed at this meeting.

Agenda Item 1.16 - *to consider the regulatory and operational provisions for Maritime Mobile Service Identities (MMSIs) for equipment other than shipborne mobile equipment, taking into account Resolutions 344 (Rev.WRC-03) and 353 (WRC-03)*
Preliminary CEPT positions:

- support the assignment of MMSIs to SAR aircraft and aids to navigation.
- support the development of a unique and entirely different format for the MMSIs assigned to SAR aircraft and aids to navigation , and
- support the registration of MMSIs assigned to SAR aircraft and aids to navigation in the Maritime Mobile Access and Retrieval System (MARS).

Agenda Item 1.17 - *allocation to the FSS for feeder links for non-geostationary-satellite networks in the mobile-satellite service with service links below 1 GHz in the bands 1390-1392 MHz (Earth-to-space) and 1430-1432 MHz (space-to-Earth).*
Preliminary CEPT position:
CEPT seeks to ensure that the existing services in the subject bands and in the adjacent passive band are fully protected:
CEPT is of the view that for the downlink the following regulatory provisions are required:

- a pfd limit of [-164/-150 – 10log(N)] dBW/m^2 in 4 kHz in the band 1430-1432 MHz for the protection of the fixed and mobile services, where N is the number of satellites sharing the same 4 kHz in one MSS network.
- an epfd limit of –243 dBW/m² in 27 MHz and –259 dBW/m² in any 20 kHz bandwidth for 98 % of 2000 seconds measurement periods at each radio astronomy station for spectral line observations in the band 1400-1427 MHz for the protection of the Radio astronomy Service,
- a power limit of -46 dBW in the band 1400-1427 MHz for the protection of the Earth exploration satellite service.
- In the territory of any administration listed in RR n° 5.342, a pfd limits in any 4 kHz in the band 1 430-1 432 MHz for the protection of the mobile service (aeronautical telemetry):

–181 dB(W/m^2)	$0 \leq \alpha \leq 4$
–193 +20 log α dB(W/m^2)	$4 < \alpha \leq 20$
–213.3 + 35.6 log α dB(W/m^2)	$20 < \alpha \leq 60$
–150 dB(W/m^2)	$60 < \alpha \leq 90$

where α is the angle of arrival (degrees above the horizontal plane);

CEPT is of the view that for the uplink the following regulatory provisions are required:

- an emission power limit of -63 dBW in the whole band 1400-1427 MHz for the protection of the Earth Exploration satellite Service,
- a pfd limit of -180 dBW/m^2 for 98 % of 2000 seconds measurement periods at any radioastronomy stations performing continuum observations in the band 1400-1427 MHz and a pfd limit of -196 dBW/m^2 for 98 % of 2000 seconds measurement periods in any 20 kHz bandwidth at any radioastronomy station performing spectral line observations in the band 1330-1427 MHz for the protection of the radio astronomy station from MSS feeder link earth station.

- [*provision to protect radiolocation]*

Germany, Russian Federation, Netherlands, Norway and Italy expressed a view that CEPT should not support any allocation under this agenda item because it is unlikely that there any "real" MSS networks that will use it. The Netherlands expressed also the view that feeder links should use higher frequency bands. Spain expressed concern that no apparent progress is made so far in the area of compatibility studies between radiolocation service and feeder links for non-GSO satellite networks in the band 1390-1392 MHz.

Agenda Item 1.18 - *pfd limits in the band 17.7-19.7 GHz for satellite systems using highly inclined orbits*
Preliminary CEPT position:

- CEPT supports the technical studies with the aim of developing pfd limits that protect FS systems from HIO satellite systems. Initial studies conducted within CEPT have shown that the current Article 21 pfd limits are not adequate and that further studies are required to identify a suitable mask to protect the Fixed Service.
- CEPT considers that there is clearly no limitation on the eccentricity of the orbit of non-GSO satellite systems referred to in *considering g)* of Resolution 141 (WRC-03). Therefore any circular or elliptical orbit with an inclination between 35° and 145 °and apogee altitude greater than 18 000 km should be taken into account. (this excludes eccentricity equal or greater to one).

Agenda Item 1.19 - *spectrum requirements for global broadband satellite systems in order to identify possible global harmonized FSS frequency bands for the use of Internet applications, and consider the appropriate regulatory/technical provision*s
At this time CEPT does not see any need for regulatory solutions under this agenda item. CEPT supports the on-going studies in WP4A on this issue and continues to follow the developments in WSIS.

Agenda Item 1.20 - *regulatory measures for the protection of the Earth exploration-satellite service (passive) from unwanted emissions of active services in accordance with Resolution 738*.
Preliminary CEPT position:
"Develop <u>appropriate regulatory measures</u> to ensure the protection of the Earth exploration satellite service (passive) from unwanted emissions, without placing an undue burden on the relevant active services."

Agenda item 1.21 - *compatibility between the radio astronomy service and the active space services*.
Preliminary CEPT position:

- To achieve adequate protection of the radio astronomy service from interference arising from unwanted emissions of satellite services in nearby or adjacent bands, without having undue constraints on the active services.

- To actively participate in the ITU-R studies of the band-pairs for which WRC-03 could not agree on trigger levels for consultation and to indicate the impact on all concerned services of implementing or nor implementing the compatibility solutions.

Agenda Item 7.1

- *Above 3000 GHz, Resolution 118 (Marrakesh, 2002)*

To focus on the technical studies related to the possible need for frequency planning and interference management, for example to see what equivalents of radio techniques could still be applicable at these frequencies and what new techniques should be expected Although the Resolution refers to "optical", infra-red and sub-mm communications will be of more immediate importance.

- *Planning of the broadcasting-satellite service in the band 21.4-22 GHz in Regions 1 and 3 (Resolution 507 (WARC-79) (Rev. WRC 2003))*

CPG agreed on the need to ensures that existing and planned operations are not adversely affected, and that flexible use of the spectrum/orbit resources in the band 21.4-22 GHz is not jepordized. CPG is of the view that a priori planning is not necessary and should be avoided because it prevents flexiblity in use and does not account for real world demand and developments.

- *Definition of HEO*

CEPT considers that a definition of HEO shall not be included in Article 1 of the RR. The term HEO should better be included and characterised in Recommendation ITU-R S.[HEO.Sys.Char]. Consequentially, no changes to the RR are necessary.

- *Report of the Director of the Radiocommunication Bureau 1 (Resolution 951)*

Preliminary CEPT position:

CEPT recognizes the importance of flexibility in allocating frequency bands to services defined in the broadest possible way, under technical, operational and regulatory provisions to ensure technology neutrality as far as possible

- CEPT supports the ITU-R studies with the aim of identifying:
- How the current international regulatory structure has evolved in order to respond to technical and operational requirements
- What flexibility has been achieved under this structure
- What changes may be required/feasible to improve this flexibility and ensure that the introduction of new applications is not delayed
- How could this structure be made more responsive to new requirements
- What are the potential drawbacks of the possible changes to this structure

- *rationalization and clarification of Articles **9** and **11***

CEPT considers that the Rules of Procedure should be minimized to the maximum extent possible, that rationalization of Articles **9** and **11** would assist in this process and at the same time reduce the complexity of the existing provisions. Rationalization should also make the provisions more resilient to change.

Agenda Item 7.2 – *Agenda for WRC-10*

The meeting considered and agreed to the proposal to from ETSI to establish a list of possible agenda items for WRC-10. ETSI particulat interest is in regulatory considertaions for Short Range Devices.

Other Issues – *WRC-07 Chairmanship*

The CPG considered a view that based on the principle of rotation of chairmen between administrative regions, and discounting those WRCs which have been chaired by a hosting country, it is Region B's turn to chair the next WRC if there is no inviting administration (note: Region B-Western Europe). The meeting agreed that there is a need for the Region B to offer a chairman for WRC-07. The Region B Administrations will initiate consultations in this regard. CPG will consider this issue again at its next meeting.

Documents

The documents of this meeting are available at:

http://www.ero.dk

Next meeting

The next meeting of CEPT CPG is scheduled for 31 May to 3 June in Stralsund, Germany